

Work Order ID 88960 -2

August 13, 2012 7:32:41 AM

88960

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Item ID: D6101-005

Revision ID:

Item Name: Saddle Billet

Start Date: 8/13/12 Start Qty: 50.00

Required Date: 8/17/12 Req'd Qty: 50.00

Reference:

Approvals:

Process Plan: CL

Date: 12/08/13 Tooling:

Date:

QC:

Date: SPC (Y/N):

Date:

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D6101	Rev B								

100 PURCHASING 0.00

100

Purchasing Memo 0.00

Purchasing

Issue P/O: 17664

a) Description: Alluminum billet

b) 5.00" x 8.250" x 2.50" thick

c) Tolerance on all dimensions are +0.030"/-0.000"

d) Grain direction along 5.00" length

e) Material: 7075-T7351 (QQ-A-250/12)

f) Material certification required

110 Receive & Inspect for Damage & Mat'l Certs 0.00

110

Packaging Memo 0.00

Packaging Ensure material certification is attached

50
30X

50
12-8-16

12-08-13

12-8-16

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Item ID: D6101-005

Accept

N900040100

Setup

Start

NS1

Revision ID:

Stop

NS2

Item Name: Saddle Billet

Start Date: 8/13/12

Start Qty: 50.00

50

Cust Item ID:

Required Date: 8/17/12

Req'd Qty: 50.00

50

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120

QC6- Inspect dimensions to drawing

0.00

120

DAS
14
9-89

12/09/11

40

0

QC

Memo

0.00

Quality Control

Ensure Material certification comply to Dwg D6101

130

Identify as per dwg & Stock Location: MAT 44

0.00

CMK 12/09/11

130

40

0

Packaging

Memo

0.00

Packaging

140

QC21- Final Inspection - Work Order Release

0.00

140

12/9/12

QC

Memo

0.00

Quality Control

12-09-11

Picklist Print

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Page 1

Work Order ID: 88960

Parent Item: D6101-005

Parent Item Name: Saddle Billet

Start Date: 8/13/12

Required Date: 8/17/12

Start Qty: 50.00

Required Qty: 50.00

Comments: IPP A: 01.05.04New IssueEC

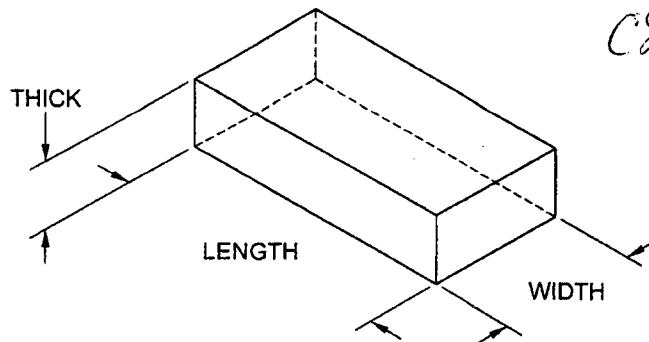
Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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D6101-005P		Purchased	No			110	Each	0.0000	1	50X 50			
7075-T7351 8.25X5.0X2.5													

50X 50 8-12-8-16

Luiz/10 (ye)

SPECIFICATION CONTROL DRAWING



C/L 12/08/13
W/O: 88960

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN.

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

B ACCEPTABLE SPECIFICATIONS FOR 7075-T7351 ALUMINUM ARE AMS-QQ-A-250/12, QQ-A-250/12, OR ASTM B209

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6101-001	7075-T7351 (QQ-A-250/12)	6.000	6.250	2.000	Along 6.000 Length
D6101-003	7075-T7351 (QQ-A-250/12)	7.875	6.250	2.000	Along 7.875 Length
D6101-005	7075-T7351 (QQ-A-250/12)	5.000	8.250	2.500	Along 5.000 Length
D6101-007	7075-T7351 (QQ-A-250/12)	7.750	8.250	2.500	Along 7.750 Length
D6101-009	7075-T7351 (QQ-A-250/12)	8.700	8.250	2.500	Along 8.700 Length
D6101-011	7075-T7351 (QQ-A-250/12)	9.700	8.250	2.500	Along 9.700 Length
D6101-013	7075-T7351 (QQ-A-250/12)	10.100	8.250	2.500	Along 10.10 Length
D6101-015	7075-T7351 (QQ-A-250/12)	9.450	6.250	2.500	Along 9.450 Length
D6101-017	7075-T7351 (QQ-A-250/12)	6.350	6.250	2.250	Along 6.350 Length

B

RELEASED
09/07/15/WB

DAS
14
12/09/11

B	ADDED D6101-015/-017, ADD ASTM B209	RF	09.04.23
A	NEW ISSUE	CP	01.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO. D6101	
MFG. APPR.		REV. B SHEET 1 OF 1	
APPROVED		TITLE SADDLE BILLET, 7075	
DE APPR.		SCALE NTS	
DATE	09.04.23		

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**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 1 of 1

Shipment No: 1458052

Ship From: A. M. Castle & Co. (Canada) Inc. MONTREAL 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped 07-SEP-2012	F.O.B. ORIGIN	Freight Terms Prepaid		Carrier MANITOULIN		BOL No 1458052-2	

Shipment Details	Final Destination Branch - MON
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Order No	Line No	Item No	Description				
2365420	1	752241.MO	2.5000.PL.7075.T7351.ALUMINUM.USI.48.5000.144.5000 CUT RECTANGLE TO 8.25 IN (+ .1250/- .0000 IN) X 5 IN (+ .1250/- .0000 IN) - ALUMINUM PLATE SAW SPECIFICATIONS: QQ-A-250/12				
Purchase Order No		Part Number		Ordered Qty		Invoice Qty	
PO17666		YOUR ITEM NUMBER: D6101-005P		40.00 PCS		40.00 PCS	
Details							
Delivery No.	Mill	Heat Number	Mech Id	PCS	Width (IN)	Length (IN)	Shipped Qty(LBS)
117920808		489362A4		40			426.6242

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Reviewed by Authorized Castle Metals Representative:

Date:

Name:

DAS
14
9-89 12/09/11

SHIP TO:

CASTLE METALS AEROSPACE
4175 ROYAL DRIVE, SUITE 600
KENNESAW, GA 30144

KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215

Phone: (800) 367-2586

SOLD TO:

CAS AERO%AM CASTLE METALS
ATTN: BOB OHR %ACCTS PAYABLES
3400 NORTH WOLF ROAD
FRANKLIN PARK, IL 60131

CERTIFIED TEST REPORT

Serial Number

4178525

CUSTOMER PO NUMBER: 23917		WORK PACKAGE:	CUSTOMER PART NUMBER: 752241 AMC CA-15745		SHIP RUN/LOAD: 101681/11	GOV'T CONTRACT NUMBER:
KAISER ORDER NO: 1089704	LINE ITEM: 1	SHIP DATE: 3-DEC-2009	ALLOY: 7075	CLAD: BARE	TEMPER: T7351	PRODUCT DESCRIPTION: Sawed Plate
WEIGHT SHIPPED: 7160 LB	QUANTITY: 4 PCS EST.	B/L NUMBER: 2025111	GUAGE: 2.5000 IN	DIAMETER/WIDTH: 48.500 IN	LENGTH: 144.500 IN	

Certified Specifications

AMS 4078/RevG
ASTM B 209/Rev07
BSS 7055/RevA
DPS 4.713/RevAH
GSS16100/RevG/Amd1

AMS-QQ-A-250/12
ASTM B 594/Rev06
CMMP 025/RevS
EAC MS1011/RevE
MMS 159/RevN

AMS-STD-2154
BAC 5439/RevH
CSTI 006/RevC
GAMPS 9101/RevB
PS 21211/RevK

Test Code: 4297

Test Results

Lot: 489362A4 Cast 276

Drop 40

Ingot 2

(ASTM E8/B557)
(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	71.4 : 72.5 (492 : 500)	60.1 : 62.2 (414 : 429)	10.3 : 11.1

(ASTM E1004)
(EN 2004-1)

Conductivity %IACS :	40.0 Min	40.5 Max
(MS/M) :	23.2 Min	23.5 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.10	0.22	1.4	0.06	2.5	0.20	5.7	0.03	0.01	0.01	TOT 0.05

DAS
12/09/11



**KAISER
ALUMINUM**

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4178525

Lot: 489754A2 Cast 276

Drop 27

Ingot 2

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	70.7 : 71.5 (487 : 493)	59.1 : 60.5 (407 : 417)	11.1 : 11.4

(ASTM E1004)

(EN 2004-1)

Conductivity %IACS :	41.4 Min	42.7 Max
(MS/M) :	24.0 Min	24.8 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.11	0.20	1.4	0.05	2.5	0.20	5.5	0.03	0.01	0.01	TOT 0.05

ALLOY LIMITS

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075 MIN	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder**TEST NOTES**

7075-T7351 plate 3.501-4.000" thick, if
ultrasonically inspected, meets requirements of CMMP025 per
SDR CMMP025-KaiserT-3. 7075-T7351 plate 4.001-5.000" thick,
if ultrasonically inspected, meets requirements of CMMP025
per
SDR CMMP025-KaiserT-2.

Metal represented by this test report was immersion
ultrasonically tested from one side and meets the Class A
and Class B requirements of all specifications referenced
on this test report.

12/09/11



RECEIVED
DEC 07 2009

CERTIFICATION

KAISER ALUMINUM FABRICATED PRODUCTS, LLC (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED IN THE UNITED STATES OF AMERICA OR A QUALIFYING COUNTRY PER DFARS 225.872-1(a), WAS MANUFACTURED IN THE UNITED STATES OF AMERICA, AND MEETS THE REQUIREMENTS OF DFARS 252.225 FOR DOMESTIC CONTENT. THIS MATERIAL HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF KAISER ALUMINUM FABRICATED PRODUCTS, LLC LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. ISO-9001:2000 CERTIFIED.

BILL POYNOR, LABORATORIES SUPERVISOR

Bill Poy